

Remarks

Claims 1, 3-5, and 7-13 were pending in the subject application. By this Amendment, the applicants have added new claim 14. No new matter has been introduced. Support for the new claim can be found throughout the original specification (see, for example; page 4, line 11; and page 6, lines 18-19). Upon entry of this Amendment, claims 1, 3-5, and 7-14 will be before the Examiner for further consideration. Favorable consideration of the claims now presented, in view of the remarks set forth herein, is earnestly solicited.

Claims 1, 3-5, and 7-13 have been rejected under 35 U.S.C. §103(a) as obvious over RO-115,885 (hereinafter referred to as “RO ‘885”) in view of Rieber *et al.* (U.S. Patent No. 4,235,794) and in further view of Kurata *et al.* (2005). The applicants respectfully traverse this ground for rejection because the cited references, taken either alone or in combination, do not teach or suggest the claimed invention.

The Action states at page 3 that it would have been obvious to a skilled artisan to modify the process of RO ‘885 by using a carbonate/bicarbonate to produce a metal salt. In support of this proposition, the Action cites the Rieber *et al.* reference for a teaching that carbonates can be used to produce metal salts. The Action goes on to assert that, while there is no teaching in RO ‘885 of specific free fatty acids, the oil used will include free fatty acids, as shown by the Kurata *et al.* reference, and that these free fatty acids will inherently “react with the methanol and sodium hydroxide to form the fatty acid salts independent of the triglycerides being transesterified and then saponified.”

The applicants respectfully disagree with the proposition that it would have been obvious to a skilled artisan to modify the process of RO ‘885 by using a carbonate/bicarbonate instead of a hydroxide. Instead, the applicants submit that one of ordinary skill would not have had any reason to make such a modification and, in fact, doing so would have rendered the RO ‘885 method unfit for its intended purpose.

The process disclosed in RO ‘885 consists of two sequential reactions: methanolysis of animal or vegetable triglycerides, followed by hydrolysis of the formed methyl esters to yield fatty acid salts. As is readily understood by one skilled in the art (and is known in organic chemistry),

these reactions require the use of a strong base, such as hydroxide. Indeed, RO ‘885 teaches the use of hydroxide as the base in these reactions. Again, as is understood in the art, neither carbonate nor bicarbonate is a strong enough base for the methanolysis and hydrolysis reactions of RO ‘885 to take place.

The Action cites the Rieber *et al.* reference for a teaching that carbonate can be used to produce metal salts. However, the process in the Rieber *et al.* reference involves reacting free fatty acids with a metal salt in the presence of a solvent. Rieber *et al.* do not teach that carbonate can be used to yield fatty acid salts by methanolysis of animal or vegetable triglycerides, followed by hydrolysis of the formed methyl esters, as in the process of RO ‘885. Instead, Rieber *et al.* only disclose that carbonate can be reacted with free fatty acids in the presence of a solvent to produce metal salts.

As discussed in the Amendment of April 2, 2009, RO ‘885 does not disclose the presence of any free fatty acids. The method of RO ‘885 reacts the triglycerides present to yield fatty acid salts. As discussed above, the methanolysis and hydrolysis reactions in RO ‘885 are known to require a strong base, such as hydroxide. Therefore, even taking into account the Rieber *et al.* reference, which discloses that carbonate can be used in a very specific type of reaction to produce metal salts, a skilled artisan would not have found a reason to modify RO ‘885 by using a weak base such as a carbonate instead of hydroxide.

The examiner asserts that some free fatty acids would be present in the RO ‘885 method and that these free fatty acids would inherently produce fatty acid salts. Even assuming, for the sake of argument, that some free fatty acids would be present in the RO ‘885 method, a skilled artisan would have had no reason to modify the RO ‘885 process to substitute a weak base such as carbonate for the strong base (hydroxide) used.

The applicants wish to emphasize once again that the methods of RO ‘885 are directed to the reaction of the triglycerides from animal fats and vegetable oils to produce soaps. Thus, even if it is assumed for the sake of argument that free fatty acids are present in the RO ‘885 method and that they inherently react to form fatty acid salts, this is not the primary (or intended) reaction in the RO ‘885 process. Despite the teaching of Rieber *et al.* that carbonate can be reacted with free fatty acids in the presence of solvent to produce a metal salt, a skilled artisan would not have found a reason to

use a carbonate in the method of RO '885, in which any reaction of free fatty acids taking place is not an intended reaction anyway.

Moreover, as discussed above, neither carbonate nor bicarbonate is a strong enough base for the intended reactions of RO '885. Thus, substituting a carbonate for the hydroxide used in RO '885 would inhibit the intended reactions of the triglycerides, the metholysis and hydrolysis, thereby rendering the RO '885 method unsuitable for its intended purpose of producing soap by metholysis and saponification of triglycerides. As the Examiner is aware, if a proposed modification would render the (purported) prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. §2143.01(V); *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

The applicants respectfully submit that only the applicants' own disclosure provides a reason to react a free fatty acid with a metal salt comprising at least one metal bicarbonate or metal carbonate. It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. The Court of Appeals for the Federal Circuit has stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fritch*, 23 U.S.P.Q.2d 1780, 1784 (Fed. Cir. 1992).

In addition, with regard to claims 11-13, the applicants submit that each of these claims recites features that are neither taught nor suggested by the combination of cited references. These claims are merely listed in the rejection with no indication of where the limitations can be found in the (purported) prior art. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). Moreover, to establish a *prima facie* case of obviousness, the Examiner must show that "there was an apparent reason to combine the known elements in the fashion claimed" by the applicants. *KSR International Co. v. Teleflex Inc.*, 550 U.S. 550 U.S. 398, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (2007); MPEP §2142.

Furthermore, the applicants submit that new claim 14 provides additional distinction over the combination of cited references. Claim 14 recites that the method further comprises isolating the

metal fatty acid salt. Even assuming, for the sake of argument, that some medium-chain free fatty acids are present in the process of RO '885, it would only be a very small amount. At the end of the process, only a very small amount of impure medium-chain fatty acid metal salt may form (though the applicants do not necessarily agree that any will form) as part of a mixture of long-chain fatty acid metal salts. As a skilled artisan would understand, due to the very small amount of medium-chain fatty acid metal salt that may be present, if any is present at all, it would not be feasible to isolate such a fatty acid metal salt, as required by new claim 14.

Additionally, the applicants note that that the Kurata *et al.* reference was published in December 2005. The subject National Stage application claims priority to International Application number PCT/GB2004/003182, filed July 23, 2004; which claims the benefit of U.S. Provisional Application No. 60/489918, filed July 25, 2003, which is before the publication date of the Kurata *et al.* article. Thus, the Kurata *et al.* article is not available as prior art; though, the applicants believe (as discussed in detail above) that the combination of cited references fails to teach or suggest the claimed invention, even if the teachings of Kurata *et al.* are taken into account.

As discussed above, a skilled artisan would not have had any reason to use a carbonate or bicarbonate salt in the RO '885 process and, in fact, doing so would have rendered the RO '885 method unfit for its intended purpose. RO '885 teaches reacting triglycerides to yield fatty acid salts, and the methanolysis and hydrolysis reactions in RO '885 are known to require a strong base, such as hydroxide, and carbonate and bicarbonate are too weak as bases for these reactions. Therefore, even taking into account the Rieber *et al.* reference, a skilled artisan would not have found a reason to modify RO '885 by using a weak base such as a carbonate or bicarbonate instead of hydroxide.

Accordingly, the applicants respectfully request reconsideration and withdrawal of the rejection under §103(a) based on RO '885 in view of Rieber *et al.* and Kurata *et al.*

In view of the foregoing remarks and the amendments to the claims, the applicants believe that the currently pending claims are in condition for allowance, and such action is respectfully requested.

The Commissioner is hereby authorized to charge any fees under 37 CFR §§1.16 or 1.17 as required by this paper to Deposit Account No. 19-0065.

The applicants invite the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,



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Attachment: Request for Continued Examination (RCE)